

IN THE CLAIMS

Please cancel claims 1-20 without prejudice or disclaimer, and add new claims 21-36 as follows:

1-20 (Cancelled)

21. (New) A storage control device, comprising:

a channel adapter which is operatively coupled to a computer, provides upper logical volumes for the computer and receives data sent from the computer to the upper logical volumes;

a memory which is operatively coupled to the channel adapter and stores the data sent from the computer and configuration information with respect to a configuration of the storage control device;

a disk adapter which is operatively coupled to the channel adapter and the memory, controls reading and writing the data from/to the memory and provides inner logical volumes at least one of which is mapped to a one of the upper logical volumes, the inner logical volumes being used as storing regions for transmission and reception of the data between the channel adapter and the disk adapter; and

a plurality of disk drives, which are operatively coupled to the disk adapter, in which the data sent from the computer are written by control of the disk adapter as a data group,

wherein a first inner logical volume of the inner logical volumes is mapped to a first upper logical volume of the upper logical volumes and is mapped to a first set of disk drives in the plurality of disk drives, a first data group targeted to the first inner logical volume is written into the first set of disk drives,

wherein a second upper logical volume of the upper logical volumes is used by the computer for control the storage control device and is utilized when the configuration information in the memory is read by the computer,

wherein the channel adapter receives a command including a change-over instruction, which includes information identifying a second inner logical volume of the inner logical volumes, from the computer sent for the second upper logical volume, and

wherein the channel adapter maps the second inner logical volume instead of the first inner logical volume to the first upper logical volume in response to the

change-over instruction issued from the computer to the second upper logical volume and operates to start a second set of disk drives in the plurality of disk drives mapped to the second inner logical volume.

22. (New) The storage control device as set forth in claim 21, wherein the channel adapter operates to stop driving the first set of disk drives in the plurality of disk drives mapped to the first inner logical volume in response to the change-over instruction.
23. (New) The storage control device as set forth in claim 21, wherein the channel adapter judges whether spindle motors of the second set of disk drives mapped to the second inner logical volume are being operated or not, and if the spindle motors of the second set of disk drives are being operated, the channel adapter keeps an operation of the spindle motors of the second set of the disk drives to be continued, and if the spindle motors of the second set of the disk drives are not operated, the channel adapter operates to start the spindle motors of the second set of the disk drives.
24. (New) The storage control device as set forth in claim 21, wherein if the first set of disk drives mapped to the first inner logical volume is also mapped to an another inner logical volume of the plurality of inner logical volumes, the channel adapter keeps operation of spindle motors of the first set of disk drives continuing even if the first inner logical volume is unmapped from the first upper logical volume in response to the change-over instruction.
25. (New) The storage control device as set forth in clam 21, wherein if the first set of disk drives mapped to the first inner logical volume is not mapped to another inner logical volume of the plurality of inner logical volumes, the channel adapter operates to stop spindle motors of the first set of disk drives if the first inner logical volume is unmapped from the first upper logical volume in response to the change-over instruction.
26. (New) The storage control device as set forth in claim 21, wherein in the case a second command sent from the computer to the second upper logical volume is a write command, the channel adapter judges that a content of the write command includes the change-over instruction.

27. (New) The storage control device as set forth in claim 21, wherein in case a second command sent from the computer to the second upper logical volume is a read command, the channel adapter judges that an object of the read command is the configuration information, reads the configuration information from the memory, and sends the configuration information to the computer.
28. (New) The storage control device as set forth in claim 21, further comprising:
a power control device, wherein in response to an indication from the channel adapter, the power control device stops supplying power to spindle motors of the first set of disk drives, and the power control device operates to supply power to spindle motors of the second set of disk drives.
29. (New) The storage control device as set forth in claim 21, wherein in the case that a second command sent from the computer is addressed to the first upper logical volume, the channel adapter judges that the command sent from the computer is a command concerning writing or reading of data, and in the case that the second command sent from the computer is addressed to the second upper logical volume, the channel adapter judges that the command sent from the computer is a command concerning the control information.
30. (New) The storage control device as set forth in claim 21, wherein a first content of the first data group stored in the first inner logical volume is different from a second content of a second data group stored in the second inner logical volume.
31. (New) A storage system coupled to a computer, comprising:
an interface coupled to the computer;
a plurality of disk drives;
a plurality of upper volumes for the computer; and
a plurality of inner volumes which are mapped to the plurality of disk drives,
wherein a first upper volume of the plurality of upper volumes is mapped to a first inner volume of the plurality of inner volumes so as to access the first inner volume by the computer,

wherein, in response to receiving an access command at the interface from the computer for accessing the first upper volume of the plurality of upper volumes, the first inner volume mapped to the first upper volume is accessed by the computer via the first upper volume, and

wherein the first upper volume is mapped to a second inner volume of the plurality of inner volumes instead of the first inner volume in response to receiving an instruction from the computer to assign the second inner volume to the first upper volume such that the second inner volume is accessed by the computer via the first upper volume in response to receiving the access command at the interface for accessing the first upper volume.

32. (New) A storage system according to claim 31, wherein a first group of disk drives of the plurality of disk drives mapped to the first inner volume is stopped in response to receiving the instruction from the computer to assign the second inner volume to the first upper volume instead of the first inner volume.
33. (New) A storage system according to claim 32, wherein a second group of disk drives of the plurality of disk drives mapped to the second inner volume is started in response to receiving the instruction from the computer to assign the second inner volume to the first upper volume if the second group of disk drives is not operated.
34. (New) A storage system according to claim 33, wherein the first group of disk group is kept operating even if the first inner volume is unmapped from the first upper volume in response to the instruction from the computer if the first group of disk group is mapped to an another inner volume of the plurality of inner volumes.
35. (New) A storage system according to claim 34, further comprising a command device for receiving instructions from the computer as read/write commands, wherein the instruction is received at the command device as a write command.
36. (New) A storage system according to claim 35, wherein the first inner volume stores a first content which is sent by the computer during a first period before receiving the instruction, and

wherein the second inner volume stores a second content which is sent by the computer during a second period after receiving the instruction.